

WHAT IS CLAIM IS:

1. A heat sink for cooling a component, the heat sink comprising:  
a tubular body having an interior surface and an exterior surface, at least a portion  
of the exterior surface being substantially flat; and  
5 a plurality of internal fins extending from the interior surface of the tubular body,  
the plurality of internal fins being generally symmetric around a center line of the tubular  
body;  
wherein the substantially flat portion of the tubular body contacts the component  
to remove heat from the component.  
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2. The heat sink of Claim 1, wherein the heat sink has two open ends, a fan being  
attached to one of the two open ends.
3. The heat sink of Claim 1, wherein the plurality of internal fins have varying  
15 lengths.
4. The heat sink of Claim 1, wherein the heat sink further includes a plurality of  
exterior fins extending from the exterior surface of the heat sink.
- 20 5. The heat sink of Claim 1, wherein the heat sink is made from aluminum.
6. The heat sink of Claim 1, wherein the component to be cooled is a triac.
7. The heat sink of Claim 1, wherein the heat sink has a mounting ridge for  
25 mounting a clip to hold the component against the substantially flat portion of the tubular  
body.

8. A heat sink assembly for cooling a component on a circuit board, the heat sink assembly comprising:

5 a tubular body having an interior surface, an exterior surface and two open ends, at least a portion of the exterior surface being substantially flat; the interior surface having a plurality of internal fins extending from the interior surface of the tubular body, the plurality of internal fins being generally symmetric around a center line of the tubular body;

a fan attached to one of the two open ends of the tubular body to force ambient air through the tubular body;

10 wherein the substantially flat portion of the tubular body contacts the component to remove heat from the component.

9. The heat sink assembly of Claim 8, wherein the plurality of internal fins have varying lengths.

15 10. The heat sink assembly of Claim 8, wherein the tubular body further includes a plurality of exterior fins extending from the exterior surface of the heat sink.

11. The heat sink assembly of Claim 8, wherein the tubular body is made from aluminum.

12. The heat sink assembly of Claim 8, wherein the component to be cooled is a triac.

13. The heat sink assembly of Claim 8, wherein the tubular body has a mounting ridge for mounting a clip to hold the component against the substantially flat portion of the tubular body.

14. A cooktop comprising:  
a cooking plate;  
30 a plurality of heating units mounted below the cooking plate;  
a controller housing unit mounted below the cooking plate;

a circuit board for controlling the heating units, the circuit board having a plurality of components, the circuit board mounted inside the controller housing unit;

a heat sink assembly for cooling the plurality of components of the circuit board, the heat sink assembly attached to the circuit board, the heat sink mounted inside the controller housing unit, the heat sink assembly having

a tubular body having an interior surface, an exterior surface and two open ends, the interior surface having a plurality of internal fins extending from the interior surface of the tubular body;

a fan attached to one of the two open ends of the tubular body to force ambient air through the tubular body;

wherein the exterior surface of the tubular body contacts the plurality of components to remove heat from the components.

15 15. The cooktop of Claim 14, wherein the plurality of internal fins being generally symmetric around a center line of the tubular body.

16. The cooktop of Claim 14, wherein the plurality of internal fins have varying lengths.

20 17. The cooktop of Claim 14, wherein the tubular body further includes a plurality of exterior fins extending from the exterior surface of the heat sink.

18. The cooktop of Claim 14, wherein the tubular body is made from aluminum.

25 19. The cooktop of Claim 14, wherein at least one of the plurality of components is a triac.

30 20. The cooktop of Claim 14, wherein the tubular body has a mounting ridge for mounting a plurality of clips to hold the plurality of components against the exterior surface of the tubular body.